SAVANNAH & OGEECHEE BARGE CANAL Between Ogeechee & Savannah Rivers Savannah vicinity Chatham County Georgia HAER No. GA-139

# PHOTOGRAPHS

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HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
U.S. Department of the Interior
1849 C St. NW
Washington, DC 20240

#### HISTORIC AMERICAN ENGINEERING RECORD

Savannah & Ogeechee Barge Canal HAER No.GA-139

**PRINCIPAL** 

DIMENSIONS: Length: 16.5 miles

Width: 48' (at top) 33' (at bottom)

Depth: 5'

LOCATION: Chatham County, Georgia

DATES OF

CONSTRUCTION: 1825-1830

DESIGNER: Ebenezer Jenckes

De Witt Clinton, Jr.

BUILDER: De Witt Clinton, Jr. (1825-1827)

Edward G. Gill (1827-1828)

Loring Olmstead Reynolds (1828-unknown)

PRESENT OWNER: City of Savannah - long term lease held by Chatham County

PRESENT USE: Mixed

**RESEARCHER:** 

SIGNIFICANCE: The Savannah and Ogeechee Canal was the first barge canal built

in Georgia. Built during the 'canal building' era of American transportation history it served to link two of Georgia's major rivers. Despite construction delays, failure to reach its intended terminus, and operational difficulties, the canal was the main conduit for moving agricultural goods from the interior to Georgia's coastal population centers and ports for three decades and continued to survive for many years despite competition from railroad systems. The canal was typical of nineteenth century engineering and portions retain their original characteristics.

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The Savannah and Ogeechee Canal is a 16.5 mile long barge canal between the Savannah and Ogeechee Rivers. It extends from just west of downtown Savannah's waterfront to the Ogeechee River approximately 2.5 miles upstream of the I-95 crossing. The eastern half of the canal runs east-west just north of, and roughly parallel to, I-16; the western half runs in a southwest-northeast direction from just east of the I-16/I-95 interchange to the Ogeechee River. The canal prism (i.e. the cross-sectional dimensions of the canal channel) was 48 feet wide at its top, 33 feet wide at its base, and five feet deep when it was finished. The canal was formed between two parallel earthen beams in the areas where it was above the surrounding countryside and in the areas where the canal was built slightly below the level of the surrounding land, the canal resembles a broad ditch with elevated banks. It was built within a generally linear right-of-way averaging 120 feet in width. The canal's size was small compared with other American canals. In order to make the channel watertight, workers "puddle the prism with a thoroughly rammed thin layer of gravel and clay." The canal could accommodate a boat with a draught of 3 feet, the typical raft measured 85' by 17' and could carry about 55 to 60 tons.

The canal featured six locks, each approximately 18 feet by 100 feet, with brick walls, wooden bottoms, and wooden gates, and five lock keeper's houses, four lift locks and tidal locks at each terminus. The total rise of the canal was about ten feet and each of the lift locks raised or lowered boats about five feet. Each lock measured about 102' by 18'. Three locks were made of brick masonry, with "hydraulic lime, Roman cement, and stone quoins." The original brick locks were numbers 4, 5, and 6. The three locks nearest the city were made of wood and their decay and faulty construction caused continued problems

<sup>&</sup>lt;sup>1</sup>Richard Cloues, National Historic Register Nomination Form — Savannah and Ogeechee Canal, 1997. 3.

<sup>&</sup>lt;sup>2</sup>Brad Botwick and Mark Finlay, Ph.D., *Phase I Historical and Archaeological Survey of the Savannah and Ogeechee Canal* (Submitted by New South Associates. October 18, 2000) 23. There is some dispute regarding the original building materials of Locks 3 and 4. The source cited above lists Lock 4 as brick and Lock 3 as wood. Conversations with Heather Gordon, Executive Director of the Savannah-Ogeechee Canal Museum and Mark Finlay, canal historian cast some doubt on this assertion. The *Savannah Republican*, 31 March 1830 states that the "…lift lock on the eastern extremity of the summit level" is built from the same materials as Locks # 5 and 6. This would seem to refer to Lock 3 being built from brick, rather than lock 4. A definitive answer is unclear.

<sup>&</sup>lt;sup>3</sup>Ibid.

<sup>&</sup>lt;sup>4</sup>Ibid, 23-24.

and expenses that hurt the canal's image and profitability. The smaller canals in the south never received the attention of their norther counterparts.<sup>5</sup>

Early nineteenth century America was a coastal nation. Much like their colonial predecessors of a century early, Americans of the period tended to live along the east coast or along the navigable sections of river systems that drained into the Atlantic. Americans settled along navigable waterways because waterborne transportation offered the only effective means of moving people and goods in anything but the smallest numbers. Ships, boats, and barges offered carrying capacity unrivaled by land transportation systems. Horse drawn wagons could carry a family or a few tons of cargo but nothing approaching the capacity of even a modest-sized vessel. Railroads and an effective road system were still unrealized possibilities in the early nineteenth century; railroads would not become an important transportation system until the middle part of the century, while road networks did not come into their own until the twentieth century.

Throughout most of the colonial era, waterborne transport was limited to existing or natural bodies of water such as rivers, lakes, and coastal waters. These routes were useful and did much to promote the settlement and economic development of North America. They did, however, have some basic limitations. If a body of water was obstructed by rapids, shallow water, or other impediment, it was closed to navigation. Moreover, if a water route did not exist between cities, river systems, or other important economic centers, no major trade route could exist.

During the late colonial period and in the years after the American Revolution, businessmen, engineers, and government officials began to collaborate to improve America's water transportation network. The logical and simplest first steps involved removing hazards to navigation such as rocks and fallen trees. Then, shortly after independence from Great Britain was achieved, attention turned to a far more ambitious approach, creating water routes where none had existed before.

Following the trend begun by canal builders in Europe, American engineers planned and supervised the construction of canals that by-passed impassible stretches of rivers or created entirely new water routes. Workers built a number of short canals beginning in the 1780s and two major canals of over twenty miles in length, South Carolina's Santee and

<sup>&</sup>lt;sup>5</sup>Lance E. Metz, ed., Canal History and Technology Proceedings, Vol. XIV, The Savannah and Ogeechee Canal, by Mark R. Finlay (Easton, Pennsylvania: Canal History and Technology Press, 11 March 1995), 7.

Cooper Canal and Massachusetts' Middlesex Canal opened in 1800 and 1804, respectively.<sup>6</sup>

Canal building in the United States slowed for a time during the period 1805-1817 as the young nation struggled with financial difficulties and a second war with Great Britain; during this period a few small canals were built and existing ones improved but no major projects went forward.

On July 4, 1817, work began on the most ambitious canal building project yet attempted in North America. As the United States expanded westward, the Great Lakes region began to grow in importance as an economic center. It was an area rich in natural resources and suitable for farming; moreover, the lakes provided efficient connections for intra-regional waterborne commerce. The problem facing settlers in the region was the difficulty in moving their products to markets and ports on the East Coast. The overland journey between the Great Lakes and the Atlantic was slow and expensive since no water connection existed. The conceptually simple but practically difficult solution to this problem, a solution that would facilitate movement of goods from the Great Lakes, was to build a water connection between the Great Lakes and a navigable river that flowed into the Atlantic.

The construction of the Erie Canal transformed the economy of the Northeast and Great Lakes. Suddenly the agricultural goods and mining products of the interior had a relatively easy path to the major American cities and even European markets via coastal seaports. Traffic in a westerly direction was less important in the overall scheme of the American economy but it did serve to carry finished products closer to the frontier during America's expansion.

As profound as the effect of the Erie Canal's completion was upon the Northeastern and Mid-Western economies the Canal's affect on commerce and trade in the South was less direct. Canal construction in Georgia was impeded by high river banks, frequent floods, and porous soil that prevailed in many places. Canals had previously played practically no part in Georgia's efforts to get to market.<sup>7</sup> Most southern canals were small

<sup>&</sup>lt;sup>6</sup>Peter Way, Common Labor: Workers and the Digging of North American Canals, 1780-1860 (Baltimore: Johns Hopkins University Press, 1993) 5.

<sup>&</sup>lt;sup>7</sup>E. Merton Coulter, *Short History of Georgia* (Chapel Hill, NC: University of North Carolina Press, 1993) 236.

ventures and the completion of such a lengthy and complicated undertaking as the Erie Canal coupled with its clear economic value, showed that the creation of man-made waterways was both feasible and desirable. Following the example set in New York, and most often utilizing men that had learned to be canal engineers while working on the Erie Canal, canal projects popped up around the country and eventually Georgia was no exception.<sup>8</sup>

Local interest in Savannah, Georgia turned to creating a water-link between the Savannah River and the Ogeechee River, followed by a second canal that would link the Ogeechee with the Altamaha River. Virtually every history of this waterway focuses on its commercial failures and stresses that it was sold at a sheriff's auction in 1836, five years after its opening. However, in spite of this frequent misfortune, the Savannah and Ogeechee Canal remained an active waterway into the 1890s. The value of the canal system, as originally envisioned, was that it would divert agricultural products from Georgia's interior farms and plantations to Savannah. The natural route down the Altamaha took Georgian cotton and other crops to the coast in the vicinity of Brunswick, Georgia. Savannah's merchants were envious of the trade garnered by Brunswick and saw

the two part canal system as a means to, "redeem our former importance." In 1812-13 the canals were originally chartered: two near the mouth of the Altamaha River and a third that connected the Ogeechee and Savannah Rivers above Savannah. The third was the only canal in the state to attract much attention or consume much money. However, not much work was done construction wise until the canal was rechartered again 1824.

A number of ideas were floated as solutions for the dilemma of how such an undertaking might be financed. Most Southern canals were small affairs - less capital investment and fewer workers. One reason was a suspicion of public works projects and government interference. Eventually in 1824 the state government lent \$50,000 to a local turnpike owner named Ebenezer Jenckes and granted a charter to build the canal. The project was to start with construction of the link between the Savannah and Ogeechee and

<sup>&</sup>lt;sup>8</sup>Way, Common Labor, 13-14.

<sup>&</sup>lt;sup>9</sup>Coulter, Short History of Georgia, 236.

<sup>&</sup>lt;sup>10</sup>Metz, Canal History, 9.

<sup>&</sup>lt;sup>11</sup>Coulter, Short History of Georgia, 236.

<sup>&</sup>lt;sup>12</sup>Way, Common Labor, 13-14.

then attention would shift to linking the Ogeechee with the Altamaha. Backed by support from the media and local government, Jenckes was able to sell \$100,000 of shares in his venture during 1825-1826; this augmented the \$50,000 seed money lent by the state to Jenckes.<sup>13</sup> Georgia also subscribed for \$44,000 worth of stock.<sup>14</sup>

A canal construction project, especially in the days before mechanized construction equipment, required the direction of skilled engineers. Jenckes traveled north, to New York, to search for a suitable engineer. In mid-1825 he met with De Witt Clinton, New York's governor and one of the driving forces behind the construction of the Erie Canal. Governor Clinton had an engineer in mind when Jenckes solicited advice on choosing a chief engineer, the governor's twenty-year old son. Jenckes followed the governor's advice and offered the young engineer the position. De Witt Clinton Jr. accepted Jenckes' offer in October and made his way to Savannah in December 1825.<sup>15</sup>

By all accounts, despite his age, Jenckes was a competent engineer. His tenure at the helm of the Savannah and Ogeechee project, however, was quite short. The young engineer resigned in March 1827, in part over a major disagreement with the canal company over the construction of a feeder canal to ensure an adequate water supply. At that time the board also accepted the resignation of engineer DeWitt Clinton Jr. leaving Edward H. Gill as chief engineer. In October 1828 Gill also left Savannah and the project was back in the hands of Ebenezer Jenckes.<sup>16</sup>

The trouble surrounding Clinton's resignation was far from the only trouble marking the canal's early years. Ebenezer Jenckes as not able to raise sufficient money to keep the effort, up to this point a private venture on his part, going. In 1826, a number of local investors stepped in to form the Savannah, Ogeechee, and Altamaha Canal Company (SOACC).<sup>17</sup>

<sup>&</sup>lt;sup>13</sup>Metz, Canal History, 9-10.

<sup>&</sup>lt;sup>14</sup>Amanda Johnson, *Georgia as Colony and State: 1733-1937* (Atlanta: Walter W. Brown Publishing Co., 1938) 401.

<sup>&</sup>lt;sup>15</sup>Metz, Canal History, 10-11.

<sup>&</sup>lt;sup>16</sup>Ibid, 11.

<sup>&</sup>lt;sup>17</sup>Georgian, 9 January 1827.

The canal was a larger undertaking than anything that had preceded it in Savannah's history. The project involved a degree of capital accumulation, technical expertise, and hands-on management that were beyond the scope and scale of other local enterprises. The labor question was especially complex. The Canal Company never considered purchasing its own slaves and local canal builders followed the national pattern of seeking immigrant labor. Lenkes and assistant engineer Van Slyke offered a subcontract for a four-mile section of the canal to Peter M'Intyre and Ezekiel Baldwin of New York in 1826. These men arranged for the passage of about seventy men from Ireland, but just a few weeks later they left with the \$700 that Jenckes advanced them. Local Catholic clergymen and the Hibernian Society brought food, clothing and religious messages to the penniless workforce. This episode helped to bring about a sudden shift toward the use of African American slaves as canal labor force. The canal company hired local planters as

subcontractors which allowed slaveowners to claim \$1 a day for each slave employed. As a result, many that owned the lands along the canal prospered before the canal was even finished.<sup>20</sup>

By 1827 and 1828 the civic commitment and optimism that had surrounded the canal project had begun to evaporate. Investors, including the City of Savannah, were delinquent on stock payments and about two thirds of the outstanding stock was abandoned altogether. As funds disappeared the size of the workforce declined dramatically. Nearly five years after construction began, workers completed the 16.5 mile route that linked the Savannah and Ogeechee Rivers. The project had cost about \$175,000.<sup>21</sup>

The water supply for the canal was a manmade reservoir, now known as Half Moon Lake. In times of low rainfall, the reservoir could not always supply the canal's water needs. As part of the canal project nine culverts, one aqueduct and eleven bridges were built at the time of the canal opening. The bridges varied in construction material and in quality. Some required brick siding and substantial embankments and others were simple wooden plank construction. <sup>22</sup>

<sup>&</sup>lt;sup>18</sup>Metz, Canal History, 15.

<sup>&</sup>lt;sup>19</sup>Botwick, Phase I Historical and Archaeological Survey, 20.

<sup>&</sup>lt;sup>20</sup>Ibid.

<sup>&</sup>lt;sup>21</sup>Georgian, 23 December 1830.

<sup>&</sup>lt;sup>22</sup>Savannah Georgian, 26 August 1834.

There was increased commercial and industrial development in the Savannah area due to the canal construction. On the Ogeechee River new sawmills opened and there was regular trade in timber, lumber, and rice. Over five hundred boats traveled through the canal from April 1834 to March 1835. Nonetheless, the canal suffered from numerous problems during these early years. Minute records from board meetings between 1831 and 1835 show that almost all of the meetings dealt at one point or another with seeking funds to placate creditors and finance repairs.<sup>23</sup>

A breach in the canal in September 1835 was the final blow for the original canal company. The break required almost 300 days of slave labor to repair and many board members wanted to scrap the project all together. The Savannah and Ogeechee Canal, like many other canals in the United States, failed to generate the traffic and revenues that its promotors had promised while in the midst of the "canal fever" of the mid-1820s. Investors abandoned the project just as quickly in the midst of the "railroad fever" of the mid-1830s. <sup>24</sup> In 1837 shareholders sold the majority interest in the canal, its adjoining structures and property and the right to collect tolls to businessman Amos Scudder for one tenth of par value.

Yet the canal was not killed by the railroad. The new management team headed by Amos Scudder was able to keep the canal alive. Scudder was a city alderman, architect and building contractor and he helped to pass a bill that required all those that owned land along the canal to pay a supplemental tax. He was also able to convince the local bankers and city councilmen to extend credit to the canal company in 1838 and 1839 with a larger loan of \$25,000 from the city in 1840. With these funds the SOACC was able to thoroughly rehabilitate the waterway. Lock 1 on the Savannah River was moved 70 feet away from its original site and completely rebuilt with local brick and stone imported from the north.

Though the renovation projects began in 1837, regular trade and profits couldn't be seen until the canal reopened in 1847. It received a new charter and adopted new bylaws in 1849 under the name Savannah and Ogeechee Canal Company. By the 1850s, the canal was reborn as an important element in the south Georgia economy.<sup>26</sup> The canal was an

<sup>&</sup>lt;sup>23</sup>Metz, Canal History, 15.

<sup>&</sup>lt;sup>24</sup>Ibid, 18.

<sup>&</sup>lt;sup>25</sup>Johnson, Georgia as Colony and State, 401.

<sup>&</sup>lt;sup>26</sup>Botwick, *Phase I Historical and Archaeological Survey*, 26.

important lifeline especially for the area lumbar merchants, but was also used to ship cotton, rice, guano, bricks and other goods to the enterprises on Savannah's west side. The canal company was prosperous and routinely paid dividends to its investors.

The canal remained operational during much of the Civil War. Business was not seriously interrupted during the first part of the war. Confederate patriotism and economic opportunity prompted new industries along the canal. However, in 1862 the fall of Fort Pulaski brought drastic changes to Savannah's economy and a decline in canal operations was inevitable. The canal saw as much as \$20,000 of damage during the war and was closed for several months thereafter. <sup>27</sup> Nevertheless, the canal company was not finished yet.

The canal suffered a gradual decline rather then a sudden death. Logging interests moved westward in the state after depleting eastern Georgia's timber resources. The canal company reduced tolls and placed limits on boat size. This suggested that demand was in decline. The turning point was in 1876. Heavy rains damaged the canal embankments in June and at the same time the rains were linked to a yellow fever epidemic that killed over one thousand locals. The canal became a public health issue as well as a commercial one. Public officials believed that the stagnant waters, overflowing banks and inadequate drainage along the canal were to blame for the outbreak. In the 1880s, the canal-front property was bought by Central of Georgia Railroad and by the early 1890s it owned all of the stock. The only portion of the canal that it maintained was the section that passed along its properties along the industrial corridor of Savannah. Like many of its northern counterparts, the Savannah and Ogeechee Canal did not live up to the expectations of the 1820s.

Today long portions of the canal are still intact, portions have been altered or overgrown, and a few short stretches have been blocked, infilled, or obliterated completely. Portions of all six locks remain, some virtually intact with the exception of the wooden gates, along with the known foundation sites of at least one lock keeper's house, clay borrow pits, and the site of a brick kiln. A short arched brick aqueduct over a drainage canal is also remaining, partially at least. At its highest point, where the canal intersects the Little Ogeechee River, the canal walls impounded Half Moon Lake, a water supply. The lake has now been partially drained through a breach in the walls and is now overgrown. In

<sup>&</sup>lt;sup>27</sup>Johnson, Georgia as Colony and State, 401-402.

<sup>&</sup>lt;sup>28</sup>Botwick, Phase I Historical and Archaeological Survey, 28.

<sup>&</sup>lt;sup>29</sup>Ibid, 30.

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the 1930s a flood gate was installed in the canal near the Savannah River and other alterations made to incorporate the canal into a regional drainage system.<sup>30</sup>

Despite its spotted history, the Savannah and Ogeechee Canal was an important element in the economy of coastal Georgia. Mirroring national trends, the canal fell victim to a powerful railroad, epidemic disease and fundamental changes in the social and economic relationships of the South.

<sup>&</sup>lt;sup>30</sup>Cloues, National Historic Register Nomination Form, 4.

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